

CCDEH

Guidelines for Construction and Operation of Interactive Water Fountains

Background

Interactive water fountains typically consist of water spray or jet devices located in an area accessible to the public. They are intended to provide individuals with a means to play in the water without going into a swimming pool. These interactive water fountains are becoming very popular in settings around swimming pools and in nontraditional settings, such as outdoor malls and amusement parks.

In the recent past, interactive water fountains have been associated with the transmission of waterborne disease outbreaks of shigellosis and cryptosporidiosis.

The purpose of these guidelines is to clarify the requirements necessary to properly construct and operate interactive water fountains in a safe and sanitary manner.

Scope

These guidelines apply only to interactive water fountains as defined below, regardless of where the attraction is located.

Definition

Interactive water fountains with recirculated water are considered special purpose pools. Interactive water fountains are water features where interaction with the water by the public is encouraged and not discouraged. These type of pools are constructed and designed so that there is no accumulation or ponding of water on the surface of the ground. Water is stored in an underground reservoir or surge chamber. Water is sprayed into the air through special nozzles. After the water hits the ground it drains back to the surge chamber. A recirculation system draws water from the surge chamber where it is filtered, disinfected and returned to the surge chamber.

Requirements:

1. A plan review and approval is required by the Enforcing Agency prior to construction.
2. All parts of the interactive fountain must be designed, constructed, maintained and operated so there are no slip, trip or fall hazards or other conditions that may pose a safety hazard.
3. The splash zone must be properly sloped so that only water from the jet sprays flows back to the surge tank. Areas adjacent to the splash zone must be sloped away from the collection drains. Plants or vegetation within the immediate area of the splash zone are prohibited.
4. There shall be no ponding of water within the splash zone.
5. The spray devices must be designed, constructed and installed so that they do not create a safety hazard. Nozzles that spray from the ground level must be flush with the ground, with openings no greater than one-half inch. Spray devices that extend above the ground must be high enough so they can be clearly seen and are not a trip hazard.
6. All foggers and jet nozzle sprays that produce finely atomized mists must be connected to a separate potable water source.
7. The recirculation system must be on a separate loop and not interconnected with the jet spray pump.
8. The attraction pump(s) and recirculation pump must be electrically interconnected so they

are both on and off together.

9. The total volume in the surge tank, including all piping, must be at least 4,000 gallons.
10. The volume in the surge tank, including all piping, must be a minimum of 3 times the flow rate of all attraction pumps and the recirculation pump combined, e.g., if the flow rate of all pumps is 2,000 gpm, a volume of at least 6,000 gallons would be needed.
11. The turnover rate shall not exceed 30 minutes.
12. The suction intake of the jet spray pump in the surge tank must not be located in the immediate vicinity of the suction intake of the recirculation pump. It must be located as close as possible to the recirculation return line.
13. The suction intake from the recirculation pump must be located in the lowest portion of the surge tank.
14. The surge tank must be designed to have easy access for cleaning and inspection.
15. A free chlorine residual of at least 3.0 ppm and pH of 7.2 - 7.6 must be maintained at all times the fountain is in operation. This level must be present as measured in the surge tank. A separate point-source chlorinator may be required on the jet spray piping if a proper free chlorine residual cannot be maintained.
16. The pool must comply with all other applicable sections of the pool code. Each Enforcing Agency is responsible for determining the applicability of sections of the pool code.